

Appln. of: Mielke  
Serial No.: 10/733, 768  
Filed: December 12, 2003

### REMARKS

Reconsideration and allowance are respectfully requested.

Claims 1-15 are pending in this application.

Claims 1-2 and 4-6 stand rejected under 35 USC 103(a) as being unpatentable over Derehag in view of Kiyomiya and Metziger.

Applicant respectfully traverses this rejection.

Claim 1 requires (emphasis added):

1. A method for the forming of components of complex shape by electrochemical material removal, in which, in the presence of an electrolyte, a linear oscillation of at least one of an electrode and a component to be machined is performed relative to the other, a circular oscillation of at least one of the electrode and the component to be machined is performed relative to the other, and a linear feed and a circular feed of at least one of the electrode and the component to be machined relative to the other are performed simultaneously, as well as simultaneously to at least one of the circular oscillation and the linear oscillation.

Thus, claim 1 requires, inter alia, that 1) a linear feed and a circular feed of at least one of the electrode and the component to be machined relative to the other are performed simultaneously with each other, and 2) also performed simultaneously to at least one of the circular oscillation and the linear oscillation. In other words, claim 1 requires a linear feed and a circular feed of at least one of the electrode and the component to be machined relative to the other, and at least one of the circular oscillation and the linear oscillation, are all performed simultaneously with each other.

The Examiner states that such is taught by Derehag: "Derehag et al teaches a method of material removal including . . . a linear feed and a circular feed of at least one of the electrode

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and the component to be machined relative to the other are performed simultaneously, as well as simultaneously to at least one of the circular oscillation and the linear oscillation to form a complex shape, such as a blisk (p. 9, lines 8-18)"

Applicant respectfully disagrees with the Examiner's statement. Contrary to the Examiner's statement, Derehag specifically states:

Each of the EDM electrodes 6 has a shape which corresponds essentially to the shape of the desired channels 12. In order to bring about the desired domed shape of the blades 13, the EDM means 4 is made to perform both a reciprocating movement and a rotary movement in each EDM stage. To be precise, each EDM electrode 6 is guided into the workpiece 2 along a predetermined path. The EDM means 6 is made to perform an oscillating movement when the EDM electrodes have reached their final position in order to produce the desired structure on the channel walls. (Derehag, p. 9, lines 8-18, emphasis added)

As clearly stated in Derehag, the oscillating movement is only performed when the EDM electrodes have reached their final position. In other words, the EDM electrodes are at their final position and have stopped moving along the predetermined path before the oscillating movement starts. Therefore, Derehag does not disclose or suggest a linear feed and a circular feed of at least one of the electrode and the component to be machined relative to the other, and at least one of the circular oscillation and the linear oscillation, are all performed simultaneously with each other. Rather, Derehag teaches that the oscillation starts only after the linear feed and circular feed are completed. Nothing in Derehag teaches or suggests anything to the contrary.

Neither Kiyomiya nor Metziger teach or suggest anything about this particular issue, and therefore, fail to cure the deficiencies of Derehag.

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For these reasons, the combination of Derehag, Kiyomiya and Metziger fails to render obvious claim 1 and it is respectfully requested that the rejection of claim 1 under such combination be withdrawn.

Claims 2-6 all depend from claim 1 and are believed allowable for the same reasons as given with respect to claim 1, as well as for the further limitations contained therein, and it is respectfully requested that the rejections of claims 2 and 4-6 also be withdrawn.

Claims 7-9 and 12-15 stand rejected under 35 USC 103(a) as being unpatentable over Derehag in view of Tchugunov.

Claim 7 has been amended to correspond with the above arguments related to claim 1 and now requires that "the simultaneous circular feed and linear feed operate simultaneously with at least one of the circular oscillation and the linear oscillation".

As discussed above in detail, Derehag does not teach or suggest such a requirement. Tchugunov fails to overcome this deficiency of Derehag. For these reasons, the combination of Derehag and Tchugunov fails to render obvious claim 1 and it is respectfully requested that the rejection of claim 7 under such combination be withdrawn.

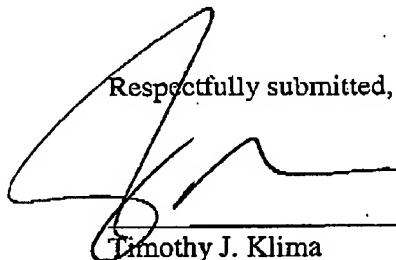
Claims 8-15 all depend from claim 7 and are believed allowable for the same reasons as given with respect to claim 7, as well as for the further limitations contained therein, and it is respectfully requested that the rejections of claims 8-15 also be withdrawn.

Claim 3 has been indicated as containing allowable subject matter. Applicant thanks the Examiner for this indication but will reserve use of such indication

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In view of the above, it is believed that the application is in condition for allowance and such a Notice is respectfully requested. If anything else is needed to place the application in condition for allowance, it is kindly requested that the undersigned be contacted.

Respectfully submitted,



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